

# 2018 Triennial Review Public Listening Sessions

May 15, 2018: London, KY

May 17, 2018: Frankfort, KY

May 24, 2018: Bowling Green, KY

June 5, 2018: Calvert City, KY

Andrea Fredenburg  
Water Quality Branch  
Kentucky Division of Water



*To Protect and Enhance Kentucky's Environment*

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# 2018 Triennial Review

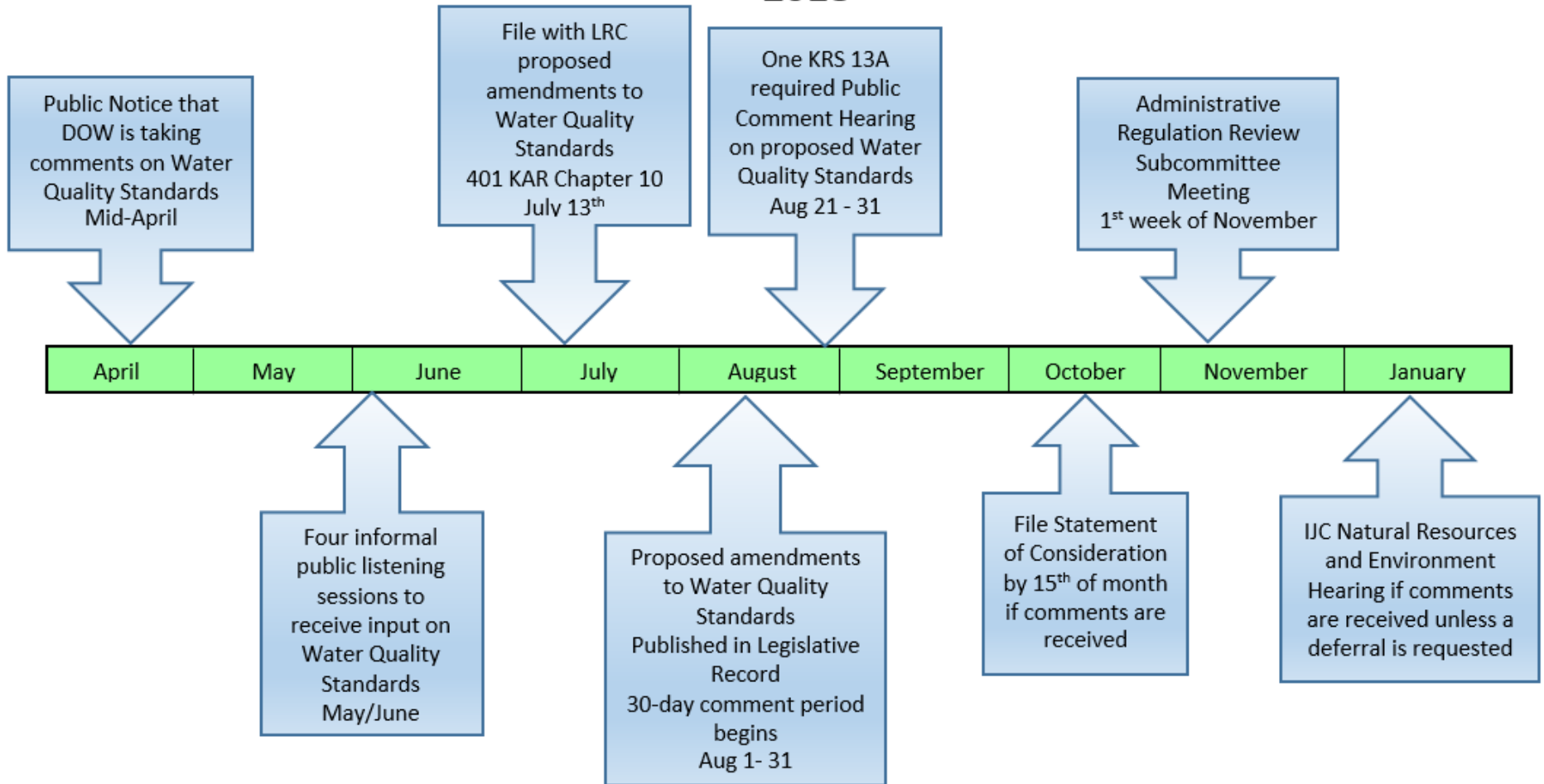
- **Clean Water Act (CWA) Section 303(c)(1) Requirements:**
  - Every 3-years
  - Review State Water Quality Standards
  - Public Participation:
    - Public Comment Period
    - Public Meetings

# WQS Amendments

- **KRS 13A**
  - File with LRC
  - Publish in Legislative Record
  - 30-Day Comment Period
  - Public Hearing

# Tentative Timeline

## Triennial Review 2018



# Purpose of Listening Session

- **Provide an Opportunity for Public Comment on:**
  - Water Quality Standards (WQS) located in 401 KAR Chapter 10
    - 401 KAR Chapter 10 Revisions
    - National Recommended WQS Criteria

# KDOW Considerations

- Human Health Criteria for 94 pollutants
- Aquatic Life Criteria for Ammonia, Cadmium, Carbaryl, and Selenium (in fish fillets)
- Recreational Criteria for *E. coli*
- Adopting CSO wet weather provisions
- Allowing use of Copper Biotic Ligand Model
- Designating 52 new Outstanding State Resource Waters (OSRW) and 29 new Exceptional Waters

# Human Health

- **94 Chemicals**

- Update to EPA's 2015 recommended criteria using:

- body weight = 80 kg,
    - drinking water ingestion = 2.4 L/day,
    - fish consumption rate = 22.8 g/d (Inland South value)

# Aquatic Life

- Ammonia

- Update to EPA's 2013 recommended criteria

- Acute Cold Water

Unionid Mussels Present and Oncorhynchus species Present

$$CMC = MIN \left( \left( \frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39.0}{1 + 10^{pH - 7.204}} \right), \right. \\ \left. \left( 0.7249 \times \left( \frac{0.0114}{1 + 10^{7.204 - pH}} + \frac{1.6181}{1 + 10^{pH - 7.204}} \right) \times (23.12 \times 10^{0.036 \times (20 - T)}) \right) \right)$$

- Acute Warm Water

Unionid Mussels Present and Oncorhynchus spp. Absent

$$CMC = 0.7249 \times \left( \frac{0.0114}{1 + 10^{7.204 - pH}} + \frac{1.6181}{1 + 10^{pH - 7.204}} \right) \times MIN(51.93, 23.12 \times 10^{0.036 \times (20 - T)})$$

- Chronic

Unionid Mussels Present and Early Life Stage (ELS) Protection Necessary

$$CCC = 0.8876 \times \left( \frac{0.0278}{1 + 10^{7.688 - pH}} + \frac{1.1994}{1 + 10^{pH - 7.688}} \right) \times (2.126 \times 10^{0.028 \times (20 - MAX(T, 7))})$$



# Aquatic Life

- **Cadmium**

- Update to EPA's 2016 recommended criteria but retain as total recovered (not dissolved)

- Acute ( $\mu\text{g/L}$ ) =  $e^{(0.9789 (\ln \text{Hardness}) - 3.866)}$

- Chronic ( $\mu\text{g/L}$ ) =  $e^{(0.7977 (\ln \text{Hardness}) - 3.909)}$

# Aquatic Life

- **Carbaryl**

- Adopt EPA's 2012 recommended criteria

**Table 1. Summary of Aquatic Life Criteria for Carbaryl**

	<b>Acute</b>	<b>Chronic</b>
<b>Freshwater</b>	2.1 µg/L	2.1 µg/L

# Aquatic Life

- **Selenium**

- Adopt EPA's 2016 recommended criteria of 11.3 mg/kg dry weight for fish fillet
- Remove Kentucky's egg/ovary value of 19.3 mg/kg dry weight
  - EPA did not approve this egg/ovary value

# Aquatic Life

- **Copper Biotic Ligand Model**
  - Retain current criteria but allow site-specific criteria using EPA's 2007 Copper Biotic Ligand Model

# Recreational Criteria

- **Primary Contact Recreation**

- Adopt EPA's 2012 recommended criteria for *E. coli* (rounded to nearest 10)

	Geometric Mean (GM) (cfu/100 mL)	Statistical Threshold Value (STV) (cfu/100 mL)	Beach Action Value (BAV) (cfu/100 mL)
<i>E. coli</i>	130	410	240
Duration and Frequency: The waterbody GM should not be greater than the criteria GM magnitude in any 7-day interval. There should not be greater than a ten percent excursion frequency of the selected STV magnitude in the same 7-day interval.			The BAV is not a criterion; it is a do not exceed value for beach notification purposes

# Recreational Criteria

- **Wet Weather Standards for residual Combined Sewer Overflows (CSOs) after full implementation of approved Long Term Control Plan (LTCP)**
  - Allow use of Financial Capability Assessment from LTCP to demonstrate substantial and widespread economic and social impact
  - Temporarily suspend recreational criteria during residual CSO events

# Recreational Criteria

- **Wet Weather Standards for residual Combined Sewer Overflows (CSOs) after full implementation of approved Long Term Control Plan (LTCP)**
  - Options: consistent with 1994 CSO Policy
    - Modify the PCR and SCR language to allow the suspension of the standard(s) during residual CSO events in accordance with an approved LTCP
    - Create a CSO designated use and criteria
    - Identify CSO receiving waters in a table in 10:026
    - Combination of all of the above
    - Possible UAA process to complete the suspension of the standard or designated use for CSO receiving waters

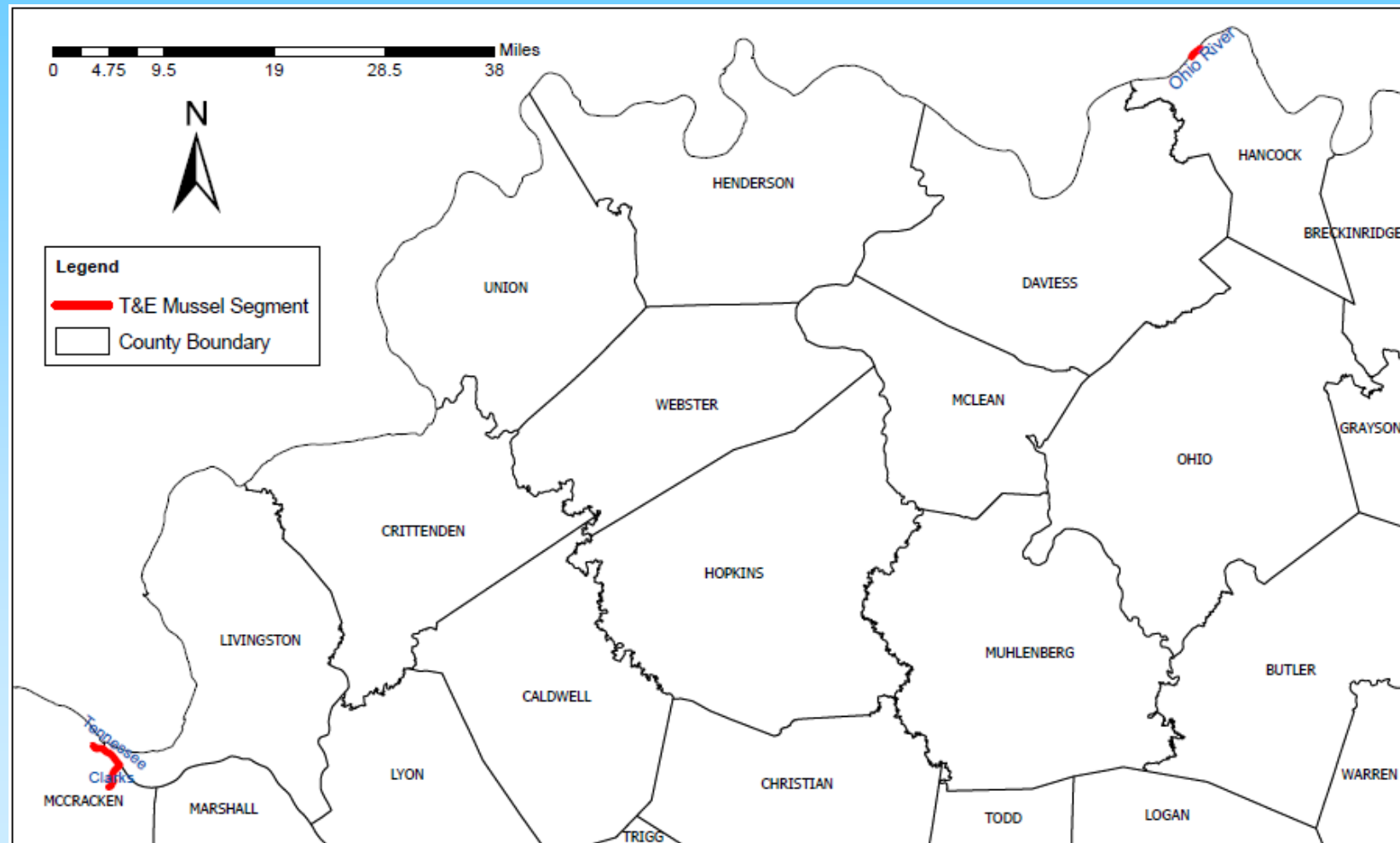
- **Add 52 Outstanding State Resource Waters**
  - KY Arrow Darter Basins and Big Sandy Crayfish Segments





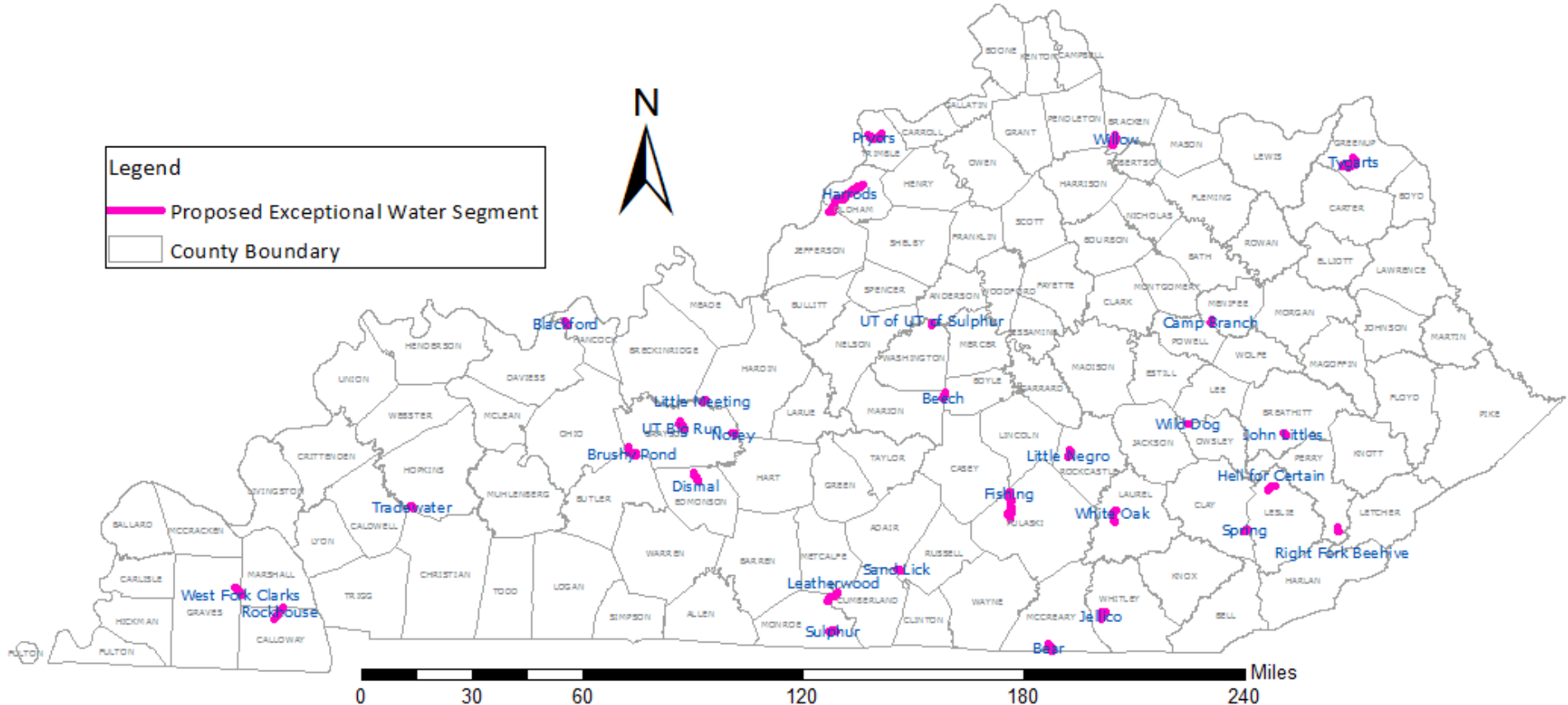
# Special-Use Waters

- Add 52 Outstanding State Resource Waters
  - 3 Segments for T&E Mussels



# Special-Use Waters

- **Add 29 Exceptional Waters**
  - Based upon finding an excellent fish or macroinvertebrate community



# Written Comments

- **June 6, 2018 @ 4:00 PM ET**
- **Mail to:**
  - Carole J. Catalfo, Esq.
  - Internal Policy Analyst
  - Division of Water
  - 300 Sower Blvd., 3NW 36WK
  - Frankfort, KY 40601
- **Email to: [water@ky.gov](mailto:water@ky.gov)**
  - “**2018 Triennial Review**” in the subject line

# 2018 Triennial Review Information

- <http://water.ky.gov/waterquality/Pages/WaterQualityStandards.aspx>